

# EXHIBIT “C”

**AMR Nurse Consultants, Inc.**  
Life Care Plans  
Medical Cost Projections  
Case Management

**Kimberly Kushner, MSN, RN, CRNP, CNLCP, CPC**  
**Certified Nurse Life Care Planner**  
Email: [Kim@AMRNurse.com](mailto:Kim@AMRNurse.com)  
215-485-5941 Fax: 267-778-9171

February 1, 2022

David Inscho, Esquire  
Kline & Specter  
1525 Locust Street  
Philadelphia, Pennsylvania 19102

**Re: Clark, Zion (DOB 4/24/2010)**  
**Address: Philadelphia, PA 19132**

Dear Mr. Inscho,

I have prepared a Life Care Plan for your client, **Zion Clark**, an 11-year-old girl. This document includes a medical summary, details of the client evaluation, recommendations for medical and non-medical services specific to the medical condition, and costs for future care.

**The following records were reviewed:**

Children's Hospital of Philadelphia, records, 4/15/2017 – 10/4/2017  
CKHS EMS - North Division, records, 4/15/2017  
Gregory Alberts, Ph.D., reports, 1/31/2022  
Guy W. Fried, M.D., report, 8/23/2021  
Miscellaneous Billing

**Record Review**

On 4/15/17, 6-year-old pedestrian Zion Clark was struck, by a motorcycle. Emergency medical personnel documented that Zion was unresponsive at the scene of the accident. Zion was transported to the emergency department of Children's Hospital of Philadelphia for evaluation and management of injuries. Upon arrival, Heather Wolfe, M.D., documented that Zion was moaning, hypertensive, and bradycardic. Her pupillary responses were asymmetric, and the Glasgow Coma Scale (GCS) was 4. Zion was intubated for airway protection. Imaging studies revealed a large right subdural hematoma with midline shift; right uncal herniation; effacement of the basilar cisterns; effacement of right lateral ventricle and sulci; and asymmetric widening of the right occipital condyle / C1 lateral mass interval concerning for traumatic atlanto-occipital dislocation (AOD). Zion required an emergent craniotomy with bone flap removal, clot evacuation, and placement of two drains. Post-operatively, Zion was monitored in the pediatric intensive care unit, and Keppra was prescribed for seizure prophylaxis. Diagnoses included severe traumatic brain injury, including right holo-hemispheric subdural hematoma with left midline shift; left holo-hemispheric subdural hematoma; cervical (C1 - C2 to C5 - C6) interspinous ligament injuries; small hepatic laceration; complex bilateral pelvic fractures, including comminuted right superior ischial ramus fracture extending into the acetabulum and the triradiate cartilage; comminuted left superior pubic and left ischial rami fractures; mildly displaced transverse bilateral inferior ischial rami fractures; nondisplaced left ischial body fracture extending into the sacroiliac joint; anterior sacral body fracture on the left at S1; left ischiopubic synchondrosis disruption; and mild right-sided sacroiliac joint widening. Zion was extubated on 4/17/17.

**Record Review, continued**

On 4/18/17, an MRI of the spine was performed. Recommendations included continued spine precautions in the Aspen collar. Wound care was ordered, and Zion continued to require medications for seizure prophylaxis.

During the hospitalization, Zion received occupational, speech, and physical therapies. On 4/19/17, speech-language pathologist Erin McLoughlin, MS, CCC-SLP, documented:

“...cognitive-communication deficits consistent with traumatic brain injury. Verbal expression is characterized by verbal perseveration and intermittent confabulations. Inconsistent responses to personally relevant yes / no questions, inconsistent ability to follow single-step commands, and inconsistent responses to biographical information noted throughout.”

On 4/20/17, occupational therapist Jennifer Dean documented that occupational therapy was deferred due to “increased agitation.” On 4/21/17, physical therapist Megan McFadden documented:

“...decreased cognition, increased agitation, increased pain, decreased safety awareness, decreased strength and balance which impacts his ability to be independent with transfers, standing, and ambulation in order to access her home, school and community environment for return to prior level of function.”

Zion remained in the acute care department at the Children’s Hospital of Philadelphia through 4/25/17. Pediatric surgeon Thane Blinman, M.D., noted:

“continued to have cognitive deficits including difficulty answering open ended questions, reduced language formulation throughout structured task (ie: picture description), maintaining attention to task and participation to about 1/2 the sessions, and requesting to termination of activity in 1/2 opportunities.”

Physically, she was starting to bear weight on her RLE during PT and OT sessions, but was not able to manage TTWB on LLE independently.

On 4/25/17, Zion was transferred to the inpatient rehabilitation department at the Children’s Hospital of Philadelphia for ongoing occupational, physical, and speech therapies. Care was provided through 5/9/17. At discharge on 5/9/2017, Zion continued to require assistive devices for mobility, including a rolling walker and crutches. Diagnoses, at discharge, included:

“...cognitive deficits including difficulty answering open ended questions, reduced language formulation throughout structured task (ie: picture description), maintaining attention to task and participation to about 1/2 the sessions, and requesting to termination of activity in 1/2 opportunities.”

Zion’s neuropsychological assessment revealed limitations with visual memory and pattern recognition. It was advised that Zion received an individualized education plan (IEP) through school so that appropriate accommodations could be made relating to the sequela of the traumatic brain injury. A comprehensive neuropsychological reevaluation was recommended in six months.

On 5/9/17, Zion was readmitted to the Children’s Hospital of Philadelphia for ongoing surgical management related to the injuries. Zion required a revision of the right craniectomy with wound debridement, and placement of a left front external ventricular drain. On 5/16/17, Zion underwent a right autologous cranioplasty and was hospitalized through 5/24/17. Equipment, including a wheelchair, rolling walker, and tub transfer bench, was arranged for the home. Recommendations at discharge included follow-up with the orthopedist, physical medicine and rehabilitation specialist, neuro-ophthalmologist, neurologist, and physical therapist.

### **Record Review, continued**

On 7/20/17, Zion presented to the emergency department at the Children's Hospital of Philadelphia for evaluation of bone flap instability and frequent headaches. Additionally, Zion's mother reported concerns regarding increased signs of aggression, hyperactivity, and difficulty with focusing. CT imaging of the brain revealed a large subdural collection and a 1.3-cm gap between the right frontal bone and the graft. On 7/24/2017, Zion underwent re-exploration and re-attachment cranioplasty utilizing titanium plates.

Guy Fried, MD., evaluated Zion and prepared a report dated 8/23/21. Zion, age 11, reported symptoms including pain as well as personality changes. Zion continued to have back, neck, and left knee pain. Pain worsened with inclement weather, walking, and standing. Zion's mother noted that Zion's personality changed significantly following the traumatic brain injury. Zion was withdrawn, irritable, and moody. Her mother described her as "depressed and anxious" and a "ticking time bomb." Zion continued to report headaches, almost daily. Bright lights and loud sounds triggered headaches. Management included lying down in a dark room. Zion's mother also reported memory impairments and a lack of insight. According to Dr. Fried, Zion "is struggling cognitively, physically, and emotionally." Dr. Fried opined, "Her injuries are serious and permanent."

On 1/5/22, Gregory Alberts, Ph.D., performed a neuropsychological evaluation to assess cognitive / neuropsychological status. According to Dr. Alberts, diagnoses include Traumatic Brain Injury (TBI) with residual / chronic right hemisphere cerebral dysfunction; Post-Traumatic Headaches, chronic, secondary to TBI; Specific Learning Disorder in Mathematics (secondary to TBI); Dysgraphia (secondary to TBI); Visual Memory Deficits (secondary to TBI); Mood Disorder Related to Another Medical Condition (TBI), Mild, with labile mood and reduced social initiative and engagement. Dr. Alberts opined that the neurocognitive deficits were likely permanent. However, Dr. Alberts opined that Zion had the potential to benefit, somewhat, from additional rehabilitation therapies as well as an Individualized Education Program due to the brain injury. Dr. Alberts recommended cognitive rehabilitation therapy, psychological therapy, and psychiatric treatment and evaluation. Dr. Alberts opined, "Her overall IQ has been reduced as a result of her TBI, and this, in conjunction with her acquired mathematics learning disability and mood disorder (should it not improve through psychological/psychiatric intervention), will adversely influence her ability to progress successfully through school and, ultimately, negatively affect her vocational earning potential." Additionally, Dr. Alberts opined that Zion's quality of life, specifically with regards to social interactions and relations, has been adversely impacted as a direct result of the traumatic brain injury.

### **Client Evaluation**

Zion and her mother, Lyesha Clark, were interviewed on 1/19/22. Zion lives with her mother and two younger siblings in Philadelphia, Pennsylvania, 19132. According to Ms. Clark, Zion was a healthy, active and happy young girl, prior to the accident in April 2017. Zion was described as very social and outgoing; she really enjoyed spending time with her extended family.

Today, Zion continues to exhibit headaches, balance and coordination deficits, and cognitive impairments. Emotionally, moods are labile and unpredictable. Headaches that are typically triggered by loud noises or bright, flashing, lights. Additionally, if Zion is too active, she will often complain of headache pain. Headaches occur several times per week.

Although she can walk and dress herself, Zion frequently exhibits balance impairments, stumbles, and falls. According to her mother, she is not very coordinated. Most distressing are cognitive deficits and emotional issues. Since the accident, Zion has become more withdrawn and does not engage with others, as she did prior to the accident. Feelings of happiness and sadness change quickly, without cause. More recently, Zion has become increasingly agitated and almost aggressive.

### Medical Care / Diagnostics

According to Dr. Fried, Zion continues to struggle cognitively, physically, and emotionally. Dr. Fried opined that Zion would benefit from follow-up with neurology and developmental pediatrics; consultation with psychiatry, cosmetic surgery, and nutrition; and an MRI of the left knee. An allocation for developmental pediatrician visits is demonstrated through age 21 to assess cognitive and physical impairments, and to supervise the therapy program. Additionally, neurologist visits are demonstrated through the lifetime for follow-up of the severe traumatic brain injury.

An allocation for 1 MRI of the knee is included, at this time, to assess persistent pain and effusion. An allocation for three consultations with a plastic surgeon is included in the cost projection for evaluation of scars on the head, ankle, and umbilical hernia region.

According to Dr. Alberts, Zion was diagnosed with a Mood Disorder Related to Another Medical Condition (TBI), Mild, with labile mood and reduced social initiative and engagement. According to Dr. Fried, Zion's mother reported frequent crying and upset feelings. Dr. Alberts recommended psychiatric evaluation and treatment. An allocation for three consultations with a psychiatrist is included in the cost projection. As per the recommendations of Dr. Fried, an allocation for three nutritional consultations is demonstrated in the Life Care Plan.

Item	Item Cost	Frequency	Cost	Source
Developmental Pediatrician Visit CPT 99213 / 99214	\$ 231	1 - 3 / year To age 21	\$ 462 / year To age 21	Physicians' Fee Reference, 2021; Medical Fees, 2021
Neurology Visit CPT 99213 / 99214	\$ 231	1 - 3 / year	\$ 462 / year	
Plastic Surgeon Consultation CPT 99203 / 99204	\$ 362	3 evaluations	\$ 1,086 once	
Nutritional Consultation CPT 97802x4	\$ 324	3 evaluations	\$ 972 once	
Psychiatric Consultation CPT 99203 / 99204	\$ 362	3 evaluations	\$ 1,086 once	
MRI of the Knee CPT 73721	\$ 1,886	once	\$ 1,886 once	

### **Therapeutic Modalities**

According to Dr. Fried, Zion would benefit from physical therapy, psychological counseling, neuropsychological testing, and cognitive retraining.

An allocation for six courses of physical / occupational therapy, 2 to 3 sessions per week, for 8 to 12 weeks, as well as six physical therapy evaluations are included in the Life Care Plan for assessment and management of balance and coordination issues.

According to Dr. Alberts, Zion “does have the potential to benefit, somewhat, from further rehabilitation therapies and specialized education programming (i.e., an Individualized Education Program under the Educational Classification of TBI). Her therapies should include Cognitive Rehabilitation Therapy, Psychological Therapy and Psychiatric Evaluation / Treatment.” Three neuropsychological testing sessions are demonstrated in the Life Care Plan to assess cognitive deficits as they relate to the traumatic brain injury. An allocation for three courses of cognitive remediation (based on 2 to 3 times per week, for 26 weeks) is included in the Life Care Plan for the development, promotion, and maintenance of cognitive function. Additionally, an allocation for 100 sessions of psychological counseling is demonstrated, to be used over the lifetime for assessment and management of mental health and wellbeing, as they relate to the severe brain injury.

<b>Item</b>	<b>Item Cost</b>	<b>Frequency</b>	<b>Cost</b>	<b>Source</b>
Physical Therapy Evaluation CPT 97162	\$ 210	6 evaluations	\$ 1,260 once	Physicians' Fee Reference, 2021; Medical Fees, 2021
Physical Therapy Session CPT 97140, 97110, 97116, 97535	\$ 330	6 courses	\$ 49,500 once	
Neuropsychological Testing CPT 96132, 96133x6	\$ 2,412	3 evaluations	\$ 7,236 once	
Cognitive Remediation CPT 97129, 97130x2	\$ 171	3 courses	\$ 33,345 once	
Psychological Counseling CPT 90834	\$ 192	100 sessions	\$ 19,200 once	

### **Case Management / Supported Living**

Based on the records, Zion sustained a severe traumatic brain injury on 4/15/17. According to Dr. Fried, Zion “is struggling cognitively, physically, and emotionally.” Dr. Fried opined, “Her injuries are serious and permanent.” Dr. Fried opined that Zion requires numerous medical consultations as well as therapeutic modalities to address ongoing physical, cognitive, and emotional impairments related to the incident. Case management services are demonstrated in the Life Care Plan to assist with coordination of medical care, and to assist with implementation of recommendations.

Based on the evaluation of Dr. Fried, Zion may require additional assistance for independent living as she ages. At a minimum, it is likely that Zion will require ongoing case management services to assist with independent living, to include medical management, as well as fiscal supervision and household organization.

Were Zion unable to safely live independently, she would require assistance in the home. The appropriate level of care would be a home health aide. The aide may provide supervision and / or assistance with daily functioning. The current cost for a home health aide is \$28 per hour (Genworth Cost of Care Survey). Home health aide costs, based on a range of 10 to 20 hours per week of home health care, ranges from \$14,560 per year (based on 10 hours per week) to \$29,120 per year (based on 20 hours per week). Only the cost for case management services is demonstrated at this time.

<b>Item</b>	<b>Item Cost</b>	<b>Frequency</b>	<b>Cost</b>	<b>Source</b>
Case Management CPT 99487	\$ 174	12 hours / month	\$ 2,088 / year	Physicians' Fee Reference, 2021; Medical Fees, 2021

**Total Lifetime Costs**

Life expectancy for a 11-year-old female, according to the 2018 United States Life Tables, National Vital Statistic Report, volume 69, number 12, November 17, 2020, is **70.6 additional years**. This life expectancy is used for calculation purposes only.

<b>Total Lifetime Cost</b>	<b>\$ 300,221</b>
----------------------------	-------------------

All costs are presented in today's dollars, without consideration for inflation or other economic changes. The opinions expressed in this document are held to a reasonable degree of life care planning and nursing certainty. I reserve the right to amend this report.

Sincerely,



Kimberly Kushner, RN, MSN, CRNP, CNLCP, CPC